

#### ABSTRACT OF THE DISCLOSURE

A pattern is drawn on a substrate at high speed and high accuracy, and a substrate stage is stably controlled. An exposure apparatus includes a substrate stage, a transfer stage which moves in the X and Y directions with the substrate stage on board, an electromagnetic actuator which moves the substrate stage relative to the transfer stage, a laser interferometer which measures the position of the transfer stage, a displacement sensor which measures a relative displacement between the transfer stage and the substrate stage, a controller which controls the electromagnetic actuator on the basis of measurement results obtained by the laser interferometer and displacement sensor, a deflector which deflects electron beams, a laser interferometer which measures the position of the substrate stage, and a filter which performs filtering for a measurement value obtained by the laser interferometer to supply the filtered measurement value to the deflector.